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WPS-PLUS/PC

Installation and Printer Tables

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About This Guide

Product: WPS-PLUS/PC Version 1.0

Purpose of This Guide

This guide describes how to install WPS-PLUS/PC software on your IBM PC or IBM PC/XT.

WPS-PLUS/PC is a word processing product that runs on the Disk Operating System (DOS). With WPS-PLUS/PC, you can create, edit, print, and file documents using menu options.

Audience

This guide is written for both novice and experienced PC users.

Required Time

You should be able to install WPS-PLUS/PC in less than half an hour.

Associated Documents

For details about how to use WPS-PLUS, you can also refer to the following documents:

WPS-PLUS/PC Getting Started

WPS-PLUS/PC Editor Functions

WPS-PLUS on PC

WPS-PLUS/PC List and Sort Processing

WPS-PLUS/PC Quick Lookup

WPS-PLUS Glossary

After you install WPS-PLUS, follow the exercises in the *WPS-PLUS/PC Getting Started* to verify the installation.

Conventions

ALT/x	Means hold down the ALT (Alternate) key while you press the function key. For example: Press ALT/RUB WORD OUT.
CTRL/x	Means hold down the CTRL key while you press the designate letter key. For example: Press CTRL/W.
Gold x	Means press the Gold key, labeled Num Lock, and then press the function key. For example: Press Gold FILE DOCMT.
Dot Matrix	Indicates text that appears on your screen.
Red Type	Shows commands you type or sample responses to prompts.
SHIFT/x	Means hold down the SHIFT key while you press the function key. For example: Press SHIFT/PASTE.
RETURN or <RETURN>	Means press the RETURN key.
WPS-PLUS	Means WPS-PLUS/PC.

1

Preparing for the Installation

Before you install WPS-PLUS, do the following:

- Unpack the diskettes in your WPS-PLUS kit.
- Check the diskettes.
- Obtain a DOS system diskette. See the Software Product Description (SPD) for the versions of DOS you can use with WPS-PLUS.

The following sections cover these topics.

Unpacking the Distribution Diskettes

Remove the WPS-PLUS diskettes from their package. The distribution diskettes are the WPS-PLUS diskettes that come with your kit. Always handle diskettes carefully by touching only the upper part of the diskette where the label is. See Figure 1-1. Diskette handling is discussed in the next sections.

Do not remove the diskettes from their paper envelopes until you are ready to start the installation.

Checking the Diskettes in Your Kit

Make sure you received five WPS-PLUS distribution diskettes. Without removing them from their protective paper envelopes, check the labels on the diskettes. They should match these labels:

WPS-PLUS SYSTEM
WPS-PLUS EDITOR/PRINT
WPS-PLUS DOC XFER/CNVT/COMM
WPS-PLUS LIST/SORT PROCESSING
WPS-PLUS UTILITY/PRINTER TBLS

If a diskette is damaged or missing, contact your local DIGITAL sales representative or call the Customer Support Center. The telephone number for the Customer Support Center is listed on the Customer Warranty Registration card in the WPS-PLUS/PC kit.

Your WPS-PLUS kit also contains key cap stickers. You can affix these stickers to your keys to easily locate WPS-PLUS functions. Use the keyboard diagram in the *WPS-PLUS Getting Started* as a guide to the placement of the stickers.

Handling Diskettes

When you remove a diskette from its paper envelope, be careful to touch only those areas covered by the protective, unremovable black jacket. Figure 1-1 shows how to remove a diskette from its paper envelope.

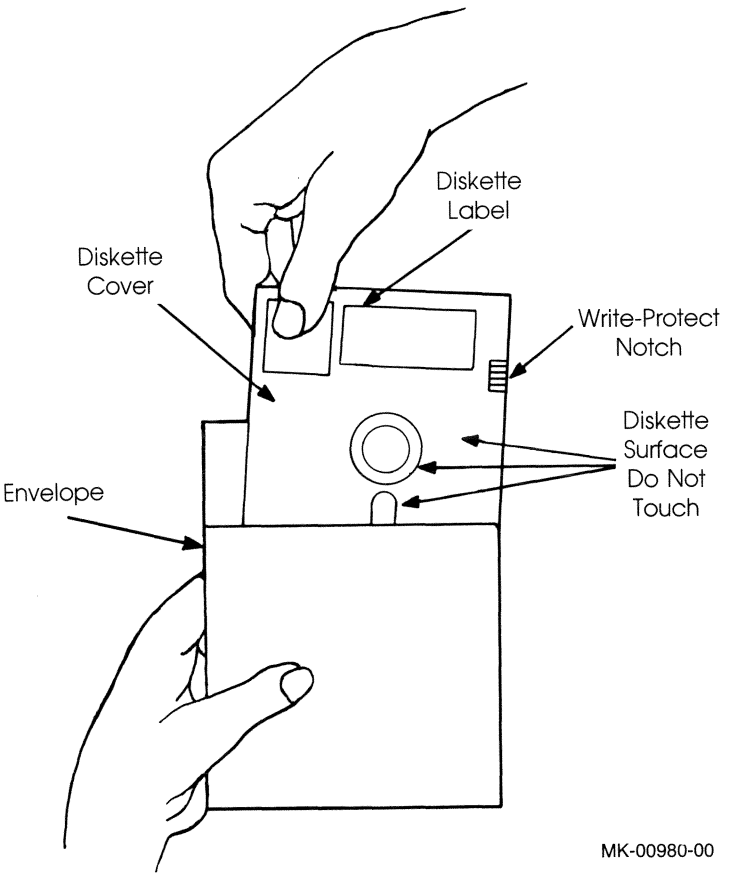


Figure 1-1: Removing a Diskette from the Envelope

During the installation, insert the diskettes, one at a time, into drive A. Instructions on the screen tell you when to insert each diskette. Be sure the label is facing up when you put the diskette in the drive. Hold the labeled end of the diskette when you insert it into the drive.

Slide the diskette straight into the drive, then gently press the drive door until it closes. If the door resists, do not force it closed, or you may damage the diskette. Instead, remove the diskette and insert it again.

Keep diskettes away from liquids and magnetic surfaces. Do not place them on any part of your computer system or any other electronic device.

If the diskettes are exposed to extreme temperatures, allow them to reach room temperature before using them.

To keep from damaging the recording surface, you should write on the diskette label before placing it on the diskette. If you write on a label already on a diskette, always use a felt-tip pen and write lightly.

WPS-PLUS/PC Hardware Requirements

WPS-PLUS/PC runs on both the IBM PC and IBM PC/XT. Before you install WPS-PLUS, make sure your PC or PC/XT has at least two double-sided (360KB) diskette drives and a minimum of 384KB of memory. You can also install WPS-PLUS if your system has a fixed disk and one diskette drive, or more than 384KB of memory.

If you are not sure how much memory your system has, you can find out when you start the system. A message shows how much memory is available. To determine whether the diskette drives are double-sided, check the hardware documentation provided for your PC.

The IBM PC/XT keyboard is required for using the WPS-PLUS functions. There is a keyboard diagram showing the WPS-PLUS functions in the *WPS-PLUS Getting Started.* You can refer to it to make sure you have a PC/XT keyboard.

Release Notes

The WPS-PLUS/PC release notes contain up-to-date information about WPS-PLUS. The release notes are in a file called RELNOTES.TXT on the WPS-PLUS SYSTEM diskette.

You should read the release notes before you start using WPS-PLUS. Follow these steps to display the notes on your screen or to print them:

1. If your PC is off, turn it on. If you have a diskette-based system, insert the DOS system diskette into drive A.
2. Type the date and time, or press RETURN (IBM books call it the Enter key) to ignore the prompts.
3. If you have a diskette-based system, remove the DOS system diskette.
4. Insert the WPS-PLUS SYSTEM diskette into drive A.

5. Type the following command:

```
A>TYPE RELNOTES.TXT <RETURN>
```

   See your PC documentation for how to stop the screen from scrolling.

6. If you have a printer attached to your PC, you can print the release notes with this command:

```
A>PRINT RELNOTES.TXT <RETURN>
```

7. When you see this message:

```
Name of list device [PRN]:
```

   press the RETURN key. The release notes are printed.

8. Remove the WPS-PLUS SYSTEM diskette and put it with the other WPS-PLUS diskettes.

Installing WPS-PLUS on Your System

There are two WPS-PLUS installation procedures. If you have a fixed disk, follow the procedure for fixed disk systems in Chapter 2. If you have a double-sided diskette drive without a fixed disk, follow the procedure for diskette-based systems in Chapter 3. To determine whether you have a fixed disk, refer to the IBM documentation that came with your PC.

2

Installing WPS-PLUS on the Fixed Disk

When you install WPS-PLUS on a fixed disk, all the files necessary to use WPS-PLUS are on drive C. There are several ways to install new software on a fixed disk depending on whether you have partitioned the disk and other factors. However, the following is a simple, straightforward method that installs WPS-PLUS in the root directory of drive C, the fixed disk.

Setting Up the Fixed Disk for WPS-PLUS

Follow this procedure to set up the fixed disk for WPS-PLUS:

1. If the PC is off, turn it on. (The term PC refers to both the PC and PC/XT models).

   The PC displays the total amount of memory available and then prompts you to enter the date and time.

2. Enter the date and time, or press RETURN to skip the prompts.

   The C > prompt appears.

   NOTE: The RETURN key is called the Enter key in IBM books. See the keyboard diagram in the WPS-PLUS Getting Started to locate keys referred to in this procedure.

3. Make sure there are at least 880,000 free bytes available on the drive. To check the number of bytes on the fixed disk, type the Check Disk command:

```
C>CHKDSK C: <RETURN>
```

   A status report appears on your screen. Check the line that lists the bytes available on the disk. It must be more than 880000. If you do not have enough bytes, you can either delete files you do not need or you can copy them to a diskette. Then delete the files from the fixed disk to create more space on the disk.

4. If you want to install WPS-PLUS in a subdirectory, create it now, if it does not already exist. For example:

```
C>MKDIR \WPSFILES <RETURN>
```

You are now ready to begin the actual installation procedure. In addition to these instructions, the procedure has menus and prompts to guide you.

Installing WPS-PLUS

BEFORE STARTING, PUT ANSI.SYS IN ROOT DIRECTORY

To install WPS-PLUS:

1. Insert the UTILITY/PRINTER TBLS diskette into drive A. Do not remove the diskette until messages tell you to.

2. Change the default drive to drive A by typing:

NOTE: MUST BE DRIVE A: NOT B:

```
C>A: <RETURN>
```

   The A> prompt appears.

3. Type INSTALL and press RETURN to start the installation process:

```
A>INSTALL <RETURN>
```

WPS-PLUS displays the first menu, as shown in Figure 2-1.

```
+-------------+
|d|i|g|i|t|a|l|    WPS-PLUS/PC Installation Main Menu V1.0
+-------------+


      F       Install WPS-PLUS onto Fixed Disk
      D       Install WPS-PLUS onto Diskette

      EX      Exit



Enter selection and press RETURN.
```

Figure 2-1: WPS-PLUS Installation Main Menu

4. Type F and press RETURN to install WPS-PLUS on the fixed disk.

   WPS-PLUS verifies that certain DOS files are accessible. If the files are not in the root directory of the fixed drive, you see a message saying a certain file could not be found. For example, ANSI.SYS could not be found. To continue the installation, see the section, Troubleshooting Installation Errors, at the end of the chapter.

The Fixed Disk Installation Menu appears, as shown in Figure 2-2.

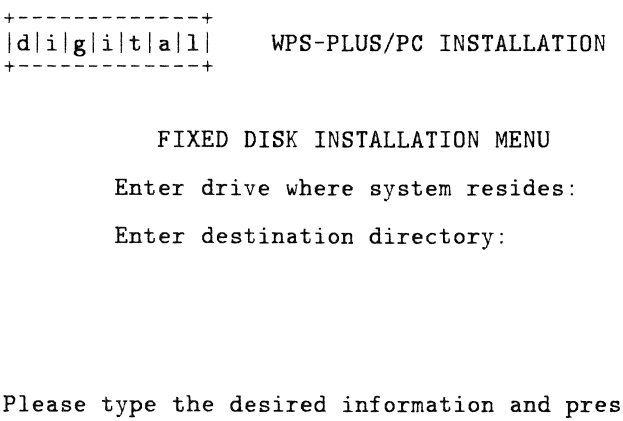


Figure 2-2: Fixed Disk Installation Menu

5. At the prompt for the drive where the system resides, type C (for the root directory of drive C) and press RETURN.

   The cursor moves to the line below the next prompt.

6. Type the name of the directory or subdirectory where you want to install WPS-PLUS and press RETURN or ENTER.

   To install WPS-PLUS in the root directory, type C and press RETURN.

   To install WPS-PLUS in a subdirectory, type C:\ and the subdirectory name. For example:

   ```
   C:\WPSFILES <RETURN>
   ```

   To install WPS-PLUS in a subdirectory, you must have created that subdirectory before you began the installation.

To create a subdirectory now:

- Press EXIT SCREEN (the 0 key on the keypad) to exit the installation procedure.
- Enter the EX option from the Installation Main Menu.

  After you have created the subdirectory, start the installation procedure again.

A screen message tells you the installation is in progress. At the bottom of the screen is a prompt to insert the WPS DISTRIBUTION SYSTEM diskette into drive A.

7. Remove the UTILITY/PRINTER TBLS diskette and insert the WPS-PLUS SYSTEM diskette into drive A.

8. Press any key.

   DOS copies the files from the WPS-PLUS SYSTEM diskette to drive C. The file names are displayed as they are copied. When all files are copied, a message tells you the SYSTEM diskette was successfully copied and to press any key to continue.

9. Press any key.

   A prompt asks you to insert the EDITOR/PRINT diskette into drive A.

10. Remove the WPS-PLUS SYSTEM diskette and insert the WPS-PLUS EDITOR/PRINT diskette into drive A. Press any key.

    WPS-PLUS copies the contents of this diskette to drive C. A message tells you when the copying is complete and to press any key to continue.

11. Press any key. When messages tell you to insert the DOC XFER/CNVT/COMM diskette, remove the EDITOR/PRINT diskette and replace it with the DOC XFER/CNVT/COMM diskette. Press any key.

    DOS copies the contents of the DOC XFER/CNVT/COMM diskette to drive C. When the copying is complete, a message tells you to press any key to continue.

12. Press any key. When you see the prompt for the next diskette, press any key. Remove the DOC XFER/CNVT/COMM diskette and insert the LIST/SORT PROCESSING diskette into drive A.

    WPS-PLUS copies the list and sort processing files onto the fixed disk. A message tells you when the copying is finished and to press any key to continue.

13. Press any key. When you see the prompt for the next diskette, remove the LIST/SORT PROCESSING diskette from drive A and insert the UTILITY/PRINTER TBLS diskette.

    WPS-PLUS copies the files from the UTILITY/PRINTER TBLS diskette to drive C. A message tells you when all the files are successfully copied and to press any key.

14. Press any key.

    A message tells you the installation was successful and to press any key. WPS-PLUS is now installed.

15. Press any key. The DOS prompt for drive A appears.

16. Remove the UTILITY/PRINTER TBLS diskette. Take all the diskettes you used during the installation procedure and store them in a safe place.

Starting WPS-PLUS

To start WPS-PLUS:

1. Restart the system by holding down the ALT, CTRL, and DEL keys at the same time.

2. If you installed WPS-PLUS in a subdirectory, at the DOS prompt, change the default to that subdirectory. For example:

```
C>CD \WPSFILES <RETURN>
```

3. At the DOS prompt, type WPS and press RETURN:

```
C>WPS <RETURN>
```

The WPS-PLUS Document Processing Menu appears. See Figure 2-3.

To learn the basics of WPS-PLUS, see the *WPS-PLUS Getting Started* guide.

```
---------------
|d|i|g|i|t|a|l|    WPS-PLUS/PC Document Processing Menu
---------------

  C    Create                    I    Index
  E    Edit                      CO   Communications
  D    Delete                    CV   Conversion
  P    Print                     UK   UDK Processing

  LP   List Processing
  SR   Sort Processing

  EX   Exit


  Enter selection and press RETURN.
```

Figure 2-3: WPS-PLUS Document Processing Menu

Troubleshooting Installation Errors

This section lists error messages you might see during the installation procedure.

- ANSI.SYS could not be found.

  WPS-PLUS could not find the file, ANSI.SYS, in the root directory of drive C. To continue the installation, locate the file and co py it to the root directory of drive C.

In the following example, substitute the name of your subdirectory, where ANSI.SYS is located, for DOSFILES:

```
C>COPY \DOSFILES\ANSI.SYS  <RETURN>
```

- File not found.

  When you see this message during installation, the installation procedure stops.

  Check to make sure you inserted the correct diskette into drive A. This message can also result when the diskette drive cannot properly read the diskette. Remove the diskette and then replace it in the drive.

  Start the installation procedure again. You do not have to delete the files already copied. They will be overwritten after the new files are successfully copied.

- Sector not found error reading drive A.

  Remove the diskette and then reinsert it. Type R to try reading the diskette again.

You should make extra copies of the WPS-PLUS distribution diskettes, in case the original set is lost or damaged. See your DOS documentation for information on making backup diskettes.

3

Installing WPS-PLUS on a Diskette-Based System

To install WPS-PLUS on a diskette-based system, first you must format a system diskette and four document diskettes. You can use either DIGITAL RX31 diskettes or IBM double-sided diskettes (360KB). During the installation procedure, WPS-PLUS copies files from the distribution diskettes to the formatted diskettes and creates directories you need for WPS-PLUS. When the installation procedure is complete, use the diskettes you created to run WPS-PLUS.

Formatting the WPS-PLUS SYSTEM Diskette

You must always format a diskette before it can be used in your PC. You can format either a used diskette you no longer need or a new diskette. The formatting procedure erases all information on the diskette. Therefore, if you are using a diskette that has information on it, be sure you no longer need the information.

NOTE: This formatting process is identical to the DOS procedure that formats system diskettes. However, there is an additional step. You must copy the ANSI.SYS file from the DOS diskette to the WPS-PLUS SYSTEM diskette. Failure to copy the ANSI.SYS file will result in errors when you attempt to use WPS-PLUS.

To format the system diskette:

1. If your PC is off, insert your DOS diskette into drive A and close the door.
2. Turn on the PC.

   OR

   If the PC is on, load DOS by holding down the ALT, CTRL, and DEL keys at the same time.

   After DOS is loaded, you see prompts to change the date and time.
3. Change the date and time or press RETURN twice to skip over the prompts.
4. Before you put the label on the diskette, write WPS-PLUS SYSTEM on a label and then place it on the first diskette to be formatted.
5. Insert the diskette labeled WPS-PLUS SYSTEM into drive B.
6. Type the command to format a system diskette at the A> prompt. In this command, the /S parameter tells DOS to format the diskette as a system diskette. The /V parameter, which is optional, prompts you for a name for the volume:

```
A>FORMAT B:/S/V  <RETURN>
```

   This message appears:

```
Insert new diskette for drive B:
and strike ENTER when ready
```

7. The diskette is already in drive B, so press the RETURN key (IBM books call it the Enter key) to start formatting the diskette in drive B.

   This message appears:

```
Formatting...
```

When the formatting is complete, the system displays this message:

```
Formatting...Format complete
System transferred
```

The next prompt asks you to label the diskette volume. Type a name of 11 characters or less, such as WPSSYS, and press RETURN.

```
Volume label (11 characters, ENTER for none)? WPSSYS <RETURN>
```

DOS prints information about the diskette and asks if you would like to format another diskette.

8. Type N and press RETURN.
9. Copy the ANSI.SYS file to the WPS-PLUS SYSTEM diskette:

```
A>COPY ANSI.SYS B: <RETURN>
```

The file name is displayed as it is copied. (This is a file WPS-PLUS needs later in the installation procedure).

10. Remove the WPS-PLUS SYSTEM diskette from drive B.

Formatting Nonsystem Diskettes

To prepare the other four diskettes for installation, repeat the formatting procedure, but use a slightly different FORMAT command.

To format the other diskettes:

1. Make labels for the other four diskettes with these names:

```
EDITOR/PRINT
DOC XFER/CONV/COMM
LIST/SORT PROCESSING
UTILITY/PRINTER TBLS
```

2. Take the label with EDITOR/PRINT and place it on one of the diskettes you want to format.

3. Insert the diskette into drive B and close the door.

4. With the DOS diskette in drive A, type this command to format the diskette:

```
A>FORMAT B:/V  <RETURN>
```

   The system instructs you to insert the new diskette into drive B, and strike any key when ready.

5. Because the diskette is already in drive B, press any key to begin the formatting.

   These messages appear:

```
Formatting...Format complete

Volume label (11 characters, Enter for none)?
```

6. Type a label for the diskette, such as EDIT-PRINT.

7. Type Y and press RETURN, when the prompt asks if you want to format another diskette.

8. When the red light near the drive door is off, remove the diskette, EDITOR/PRINT, from drive B.

9. Repeat this procedure with the next diskette, starting with step 2, to format the other three diskettes.

   In each case, be sure you have the DOS diskette in drive A. Put the diskette you want to format, the one you labeled, in drive B.

   When you have finished formatting the last diskette, you are ready to install WPS-PLUS.

If you cannot format a diskette because of errors on the diskette, you can stop the FORMAT program by pressing CTRL/C. DOS displays the A> prompt and you can continue with another diskette or other tasks.

Installing WPS-PLUS

Before you begin the installation procedure, gather the distribution diskettes, the ones that came in your WPS-PLUS kit, and the formatted diskettes you prepared in the previous section.

To install WPS-PLUS:

1. Insert the UTILITY/PRINTER TBLS diskette that came in your WPS-PLUS kit into drive A.

2. Type the INSTALL command to install WPS-PLUS and press RETURN:

```
A>INSTALL <RETURN>
```

   WPS-PLUS displays the first menu, shown in Figure 3-1.

```
|d|i|g|i|t|a|l|     WPS-PLUS/PC INSTALLATION Main Menu V1.0


F       Install WPS-PLUS onto Fixed Disk
D       Install WPS-PLUS onto Diskette

EX      Exit



Enter selection and press RETURN.
```

Figure 3-1: WPS-PLUS Installation Main Menu

3. Type D (for Install WPS-PLUS onto Diskette) and press RETURN.

   Messages tell the WPS-PLUS installation is in progress and to insert the WPS DISTRIBUTION SYSTEM diskette into drive A.

4. Remove the UTILITY/PRINTER TBLS diskette from drive A and insert the WPS-PLUS SYSTEM diskette from your WPS-PLUS kit.

5. Press any key.

   A prompt tells you to insert the SYSTEM diskette into drive B.

6. Insert the WPS-PLUS SYSTEM diskette, the one you formatted and labeled, into drive B and press any key.

   WPS-PLUS displays the file names as it copies the contents of the WPS-PLUS SYSTEM diskette to the diskette in drive B. When all files have been copied, a message tells you the distribution system diskette was successfully copied.

7. Press any key.

   Then WPS-PLUS prompts you to insert the EDITOR/PRINT diskette into drive A.

8. Remove the WPS-PLUS SYSTEM diskette from drive A and the SYSTEM diskette from drive B and press any key to continue the installation.

9. Insert the EDITOR/PRINT diskette from your WPS-PLUS kit into drive A and press any key to continue.

   A message asks you to insert the EDITOR/PRINT diskette into drive B.

10. Insert the EDITOR/PRINT diskette you formatted into drive B and press any key to continue the installation.

    DOS copies the contents of this diskette onto the diskette in drive B. When the copying is complete, press any key and a message tells you to insert the DOC XFER/CNVT/COMM diskette into drive A.

11. Remove the EDITOR/PRINT diskette from drive A and replace it with the DOC XFER/CNVT/COMM diskette and press any key.

12. Remove the EDITOR/PRINT diskette from drive B and insert the DOC XFER/CNVT/COMM diskette you formatted into drive B and press any key.

    DOS copies the contents of the DOC XFER/CNVT/COMM diskette onto the diskette in drive B. A message tells you when the diskette is copied and to press any key.

13. Press any key. A prompt asks you to insert the LIST/SORT PROCESSING diskette into drive A.

14. Remove the DOC XFER/CNVT/COMM diskette and insert the distribution LIST/SORT PROCESSING diskette into drive A and press any key to continue.

15. Remove the DOC XFER/CNVT/COMM diskette from drive B and insert the LIST/SORT PROCESSING diskette you formatted into drive B and press any key.

    WPS-PLUS copies the list and sort processing files onto the diskette in drive B. A message tells you when the copying is finished and to press any key.

16. Press any key. Messages tell you to insert the distribution UTILITY/PRINTER TBLS diskette into drive A.

17. Remove the LIST/SORT PROCESSING diskette from drive A, replace it with the distribution UTILITY/PRINTER TBLS diskette and press any key.

    WPS-PLUS prompts you to insert the UTILITY/PRINTER TBLS diskette into drive B and to press any key to continue.

18. Remove the LIST/SORT PROCESSING diskette from drive B and insert the UTILITY/PRINTER TBLS diskette you formatted. Press any key.

    WPS-PLUS copies files on the UTILITY/PRINTER TBLS diskette to the diskette in drive B. When the coping is complete, a message tells you the diskette is successfully copied and to press any key to continue.

19. Press any key.

    A message tells you the installation is complete.

20. Remove the UTILITY/PRINTER TBLS diskettes from drives A and B.

21. Collect all the diskettes that came in your WPS-PLUS kit and put them in a safe place. If the diskettes you have just created are later lost or damaged, you can copy these again to use WPS-PLUS.

Troubleshooting Installation Errors

If the installation fails because a diskette in either drive A or B could not be read or was improperly formatted, the installation procedure stops. To start it again, first reformat the problem diskette or get a new one and format it. Then start the installation procedure again.

If the installation fails due to errors on a diskette in drive A, you may see a message, File not found, and the name of the file. Remove the diskette from drive A and reinsert it. Then begin the installation procedure again. If you see the same error a second time, the distribution diskettes may have errors. Contact the Customer Service Center or your DIGITAL sales representative for help.

Starting WPS-PLUS on a Diskette-Based System

To start WPS-PLUS:

1. If the PC is off, insert the WPS-PLUS SYSTEM diskette (the copy you made during the installation procedure) into drive A and turn on the PC.
2. If the PC is on, insert the WPS-PLUS SYSTEM diskette (the one you made during the installation procedure) into drive A and hold down the ALT, CTRL, and DEL keys at the same time.
3. Type WPS and press RETURN when the A> prompt appears:

```
A>WPS <RETURN>
```

The WPS-PLUS Document Processing Menu appears. See Figure 3-2. To learn the basics of WPS-PLUS, see the *WPS-PLUS Getting Started* guide.

```
---------------
|d|i|g|i|t|a|l|    WPS-PLUS/PC Document Processing Menu
---------------

  C     Create                    I     Index
  E     Edit                      CO    Communications
  D     Delete                    CV    Conversion
  P     Print                     UK    UDK Processing

  LP    List Processing
  SR    Sort Processing

  EX    Exit


  Enter selection and press RETURN.
```

Figure 3-2: WPS-PLUS Document Processing Menu

4

Changing the Date and Time Format

When you press Gold DATE & TIME (the date and time function is on the key with the vertical bar, next to Z), WPS-PLUS inserts the date and time into your document. Unless you change it, the date appears in this format:

dd-mmm-yy day hh:mm

For example:

```
19-Feb-85 Tue 14:59
```

You have the option of four other formats for the date and time:

- dd-mm-yy day hh::mm (19-02-85 Tue 14:59)
- mm-dd-yy day hh::mm (02-19-85 Tue 14:59)
- yy-mm-dd day hh::mm (85-02-19 Tue 14:59)
- yyyy-mm-dd day hh::mm (1985-02-19 Tue 14:59)

You can also use a slash or a period as the separator instead of a hyphen.

NOTE: WPS-PLUS uses whatever date and time you enter on the PC, but reformats it. Enter the time when you start the PC or by using the DOS DATE and TIME commands. You can set the date and time either before or after you change the WPS-PLUS format.

Changing the Date and Time Format

To change the date and time format:

1. If you have a diskette-based system, insert the WPS-PLUS SYSTEM diskette into drive A. (This is the SYSTEM diskette you created during the installation procedure). If you installed WPS-PLUS on a fixed disk, set the DOS prompt to the directory where you installed WPS-PLUS.

2. At the DOS prompt, type the command to start the WPS-PLUS Utility program and press RETURN:

```
A>WPSUTIL <RETURN>
```

   If you have a diskette-based system, a prompt asks you to insert the UTILITY/PRINTER TBLS diskette into the default drive. If you have a fixed disk, the WPS-PLUS/PC Utility Main Menu appears. See Figure 4-1.

3. If you have a diskette-based system, insert the UTILITY/PRINTER TBLS diskette into drive A and press any key.

   The WPS-PLUS/PC Utility Main Menu appears:

```
---------------
|d|i|g|i|t|a|l|      WPS-PLUS/PC Utility Main Menu  V1.0
---------------



        D     Modify Date/Time Formats
        P     Modify Printer Table

        EX    Exit



  Enter selection and press RETURN.
```

Figure 4-1: WPS-PLUS/PC Utility Main Menu

4. Enter the D option and press RETURN.

   The WPS-PLUS/PC Date Time Format Menu appears, as shown in Figure 4-2.

```
---------------
|d|i|g|i|t|a|l|      WPS-PLUS/PC
---------------

                Date Time Format

    1     dd mm yy  hh:mm          <   13-01-85 Sun 10:01      >
    2     mm dd yy  hh:mm          <   01-13-85 Sun 10:01      >
    3     yy mm dd  hh:mm          <   85-01-13 Sun 10:01      >
    4     yyyy mm dd  hh:mm        <   1985-01-13 Sun 10:01    >
    5     dd mmm yyyy hh:mm        <   13-Jan-1985 Sun 10:01   >

    EX

    5


    Enter selection and press RETURN.

The current default is option 5
```

Figure 4-2: WPS-PLUS/PC Date Time Utility Menu

5. Press RUB CHAR OUT to delete the 5.
6. Type the number of the format you want and press RETURN.

   The Date Time Separator Menu appears. See Figure 4-3.

```
---------------
|d|i|g|i|t|a|l|     WPS-PLUS/PC
---------------

                    Date Time Separator


              1    /                  < 13/Jan/85 >
              2    -                  < 13-Jan-85 >
              3    .                  < 13.Jan.85 >

              EX


              2

              Enter selection and press RETURN.

The current default is option 2
```

Figure 4-3: Date Time Separator Menu

7. Press RUB CHAR OUT (on the backspace key) to delete the 2.
8. Enter the number for the separator you want and press RETURN.

   The Utility Main Menu reappears.

From now on, when you use the press Gold DATE & TIME, the format you chose appears in your document.

Exiting the Utility

To exit the WPS-PLUS Utility program:

1. Enter the EX (Exit) option from the Utility Main Menu and press RETURN.

   If you have a fixed disk, the DOS prompt appears.

   If you have a diskette-based system, a prompt asks you to insert the WPS-PLUS SYSTEM diskette into drive A. After you insert the diskette and press any key, the DOS prompt appears.

2. If you did not enter the date and time when you started the PC, do so now.

To use WPS-PLUS:

1. If you installed WPS-PLUS on a fixed disk, change the DOS prompt to the directory where you installed WPS-PLUS. If you have a diskette-based system, make sure you have the SYSTEM diskette in drive A.
2. Type WPS at the prompt and press RETURN.

   The WPS-PLUS Document Processing Menu appears.

See the *WPS-PLUS Getting Started* for instructions on using WPS-PLUS.

5

Installing Printer Tables for Another Printer

WPS-PLUS includes a special utility that allows you to use different printers or to change the date and time format. The part of the utility that handles printers lets you:

- Change printer tables if you have a printer shown in the top row of Table 5-1.
- Modify printer tables, if you have a printer not listed in Table 5-1.

This chapter tells you how to install printer tables for the printers in Table 5-1. See Chapter 6 for information on editing printer tables. See Chapter 4 for instructions on changing the date and time format.

When you install WPS-PLUS, printer tables for the IBM 5152 printer are automatically installed for you. Those tables translate the text in your WPS-PLUS document into code the printer uses to print documents. Because different printers use different code, printer tables vary from printer to printer. For example, the code that starts bolding or prints the technical character pi (π) may not be the same in another printer.

WPS-PLUS includes printer tables for all the printers listed in Table 5-1. If you want to use a printer on that list, deinstall the IBM 5152 tables and then install the tables for your printer. You do not have to deinstall the IBM 5152 printer tables if you have a fixed disk and

have room for the files. If you have a diskette-based system, you have to deinstall printer tables before you install new ones because the printer table utility allows only one set of tables in the installed area.

If your printer is not shown in Table 5-1, a systems programmer can modify the tables for the printer with features closest to the printer you want to use. Once those tables are installed, you can use all the features of your printer. See the next chapter, Modifying Printer Tables, for more information.

The following chart represents the printer support offered by various printers. The LA210 DIGITAL printer requires the LA10X-EP option. Contact your DIGITAL sales representative for ordering details.

Table 5-1: Printer Features

Feature	Printer						
	DEC LA210	IBM 5152	EPSON RX80 F/T+	NEC 3550	IBM QUIET WRITE	OKI-DATA 92A	OKI-DATA 182
Upper/Lower Case	Y	Y	Y	Y	Y	Y	Y
Bold	Y	Y	Y	Y	Y	Y	Y
Underline	Y	Y	Y	Y	Y	Y	Y
Super/Subscript	Y	Y	Y	Y	Y	Y	Y
Technical Character Set	Y1	N	N	N	Y2	Y2	N
Multinational Characters	Y3	N	N	N	Y3	Y3	N
Composite Characters	Y	Y	Y	Y	Y	Y	Y
Enhanced (LQP)	Y	Y	Y	Y	Y	Y	Y
Line Drawing	Y	N	N	N	N	Y4	N

Y1 means:

The Technical Character Set (TCS) is available with the appropriate ROM on the printer.

Y2 means:

This feature applies to only those characters contained in the IBM Graphics character set that are part of the DEC Technical Character Set.

Y3 means:

This feature applies to only those characters contained in the IBM Graphics character set that are part of the DEC Multinational Character Set.

Y4 means:

This feature applies to only those characters contained in the IBM Graphics character set that are part of the DEC VT100 Line Drawing Set.

Changing Printer Tables

When you install new printer tables, you install two tables for each printer: a character table and an attribute table. The following instructions install both tables.

The entire process of changing printer tables is handled through menus and forms.

During the procedure you:

1. Start the printer tables utility.
2. Deinstall the present (IBM 5152) printer tables from the installed area.
3. Move the new printer tables from the work area to the installed area.

See Table 5-2 for a list of the abbreviations you enter on the forms.

Table 5-2: Printers and Abbreviations

Printer Name	Abbreviation
DIGITAL LA210	LA210
IBM 5152 Model 1	IBM5152
IBM Quietwriter Model 1	QUIET
NEC 3550 LQP	NEC3550
OKIDATA Microline 92A	OKI92A
OKIDATA Microline 182	OKI182
Epson RX-80 F/T+	EPSON80

The work area is the name of a directory for printer tables you are not currently using. The installed area is the name for a directory that contains printer tables accessed by the WPS-PLUS print functions. When you install WPS-PLUS, the printer tables are organized in the installed and work areas as shown in Figure 5-1.

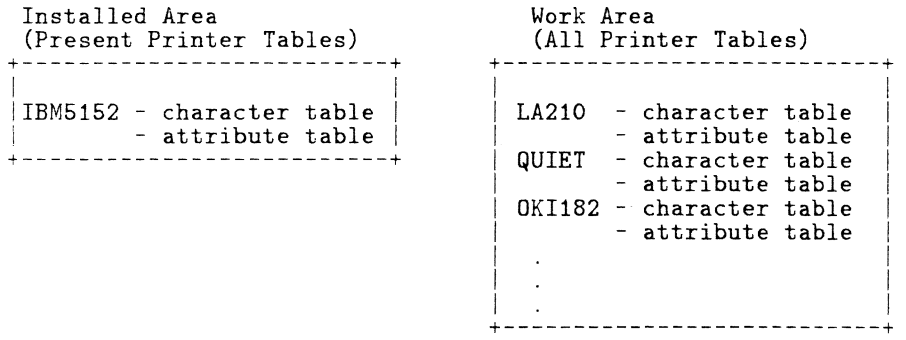


Figure 5-1: Distribution of Printer Tables at Installation

If you have a fixed disk, you may not have to move your printer tables from the installed area before you install another set of tables. If

you have enough room on the disk for both the IBM 5152 and the new printer tables (printer tables take about 2800 bytes), you can skip the deinstallation process.

If you have a diskette-based system, or a fixed disk with limited space, deinstall the IBM 5152 tables first.

Starting the Printer Table Utility

To start from a diskette-based system:

1. If your PC is off, insert the WPS-PLUS SYSTEM diskette into drive A and turn on the PC.
2. If your PC is on, insert the WPS-PLUS SYSTEM diskette into drive A and hold down the CTRL, ALT, and DEL keys at the same time to restart WPS-PLUS.

   Prompts for the date and time appear.
3. Enter the date and time or press RETURN to ignore the prompts.
4. At the DOS prompt type WPSUTIL and press RETURN:

   ```
   A>WPSUTIL <RETURN>
   ```

   A message asks you to insert the UTILITY/PRINTER TBLS diskette into drive A.
5. Remove the SYSTEM diskette from drive A and insert the UTILITY/PRINTER TBLS diskette.
6. Press any key to continue.

   The WPS-PLUS/PC Utility Main Menu appears. See Figure 5-2.

To continue, go to the section Deinstalling the Present Printer Tables.

To start from a fixed disk:

1. If the PC is off, turn it on and either enter the date and time at the prompts or press RETURN to skip them.
2. If the PC is on, exit WPS-PLUS, if necessary.

3. Make sure your current directory is the directory where the WPS-PLUS files are installed.

4. At the C > prompt, type WPSUTIL and press RETURN:

```
C>WPSUTIL <RETURN>
```

   The WPS-PLUS/PC Utility Main Menu appears. See Figure 5-2.

To continue, go to the next section, Deinstalling the Present Printer Tables.

```
+-+-+-+-+-+-+-+
|d|i|g|i|t|a|l|
+-+-+-+-+-+-+-+      WPS-PLUS/PC Utility Main Menu V1.0


        D     Modify Date/Time Formats
        P     Modify Printer Table

        EX    Exit


     Enter selection and press RETURN.
```

Figure 5-2: WPS-PLUS/PC Utility Main Menu

Deinstalling the Present Printer Tables

To deinstall the printer tables:

1. Enter the P (Modify Printer Tables) option from the WPS-PLUS/PC Utility Main Menu, and press RETURN.

   The Print Tables Utility Menu appears. See Figure 5-3.

```
+-+-+-+-+-+-+-+
|d|i|g|i|t|a|l|
+-+-+-+-+-+-+-+          PRINT TABLES UTILITY


    PA   Printer Attributes

    PC   Printer Characters

    TM   Table Management

    EX   Exit



    Enter selection and press RETURN.
```

Figure 5-3: Print Tables Utility Menu

If the Print Tables Utility Menu does not appear, you should see the Configure Directories form, shown in Figure 5-4.

```
                        CONFIGURE DIRECTORIES

INSTALLED: _____________________________________________

WORK AREA: _____________________________________________

Please enter the names of the directory structures for the
          WORK AREA and the INSTALLED directory.
```

Figure 5-4: The Configure Directories Form

If the Configure Directories form appears, either a special file, called the profile has incorrect information or WPS-PLUS cannot locate the directories for the work or installed areas. If WPS-PLUS cannot find one of the directories, the directory may have been renamed or deleted. Note that you can change the work area by using the RW (Reconfigure Work Area) option on the Table Management Menu.

Type the following to update the profile:

- If the INSTALLED field is blank, type the directory name where your WPS-PLUS files are installed. On a diskette-based system, type:

  ```
  A:\ <RETURN>
  ```

  On a fixed disk system, type the same directory name you specified when you installed WPS-PLUS. If you did not specify a subdirectory, type:

  ```
  C:\ <RETURN>
  ```

- If the WORK AREA field is blank, add the subdirectory \WORKAREA to the path name you typed for the INSTALLED field. If you have a diskette-based system, type:

  ```
  A:\WORKAREA <RETURN>
  ```

  If you have a fixed disk, with WPS-PLUS files installed in the root directory, type:

  ```
  C:\WORKAREA <RETURN>
  ```

  The Print Tables Utility Menu appears. See Figure 5-3.

2. Enter the TM (Table Management) option.

   The Table Management Menu appears as shown in Figure 5-5.

```
                    TABLE MANAGEMENT


        IT   Install Table(s)
        DT   Deinstall Table(s)
        LV   List and Verify Tables
        RW   Reconfigure Work Area



        Enter selection and press RETURN.
```

Figure 5-5: Table Management Menu

3. Enter the DT (Deinstall Tables) option and press RETURN.

   Remember, if you want to stop the deinstallation process, press EXIT SCREEN (the 0 key on the keypad) instead of RETURN. When the Print Tables Utility Menu appears, enter EX and press RETURN.

   The Deinstall Tables form appears. See Figure 5-6.

```
                    DEINSTALL TABLE(S)

INSTALLED Printer Table(s):  _______________________________

WORK AREA Printer Table(s):  _______________________________

Attribute table, Character table, or Both:  B


      Enter the name of the table(s) that you wish to move
        from the INSTALLED directory to the WORK AREA.
```

Figure 5-6: Deinstall Tables Form

4. In the first field, INSTALLED Printer Table(s), type IBM5152 and press RETURN.
5. In the second field, WORK AREA Printer Table(s), type IBM5152 again and press RETURN. You can leave this field blank if the name is the same as the installed printer table.
6. Press RETURN again to accept the B (for Both Attribute and Character tables).

   If there is a copy of the IBM 5152 attribute printer table in the work area directory, a message informs you that an attribute file by that name already exists and that it will be overwritten. When you accept the Y (yes) to continue, you keep only one copy of the table.

```
An ATTRIBUTE table by that name already exists, and will be overwritten.

Do you want to continue:  Y
```

7. Press RETURN to accept the default Y (for yes).

   If there is a character table for the IBM 5152 printer in the work area, a message asks if you want to overwrite the character table. Because it is a copy, you overwrite it.

```
A CHARACTER table by that name already exists, and will be overwritten.

Do you want to continue:  Y
```

8. Press RETURN to accept the default Y.

   The Table Management Menu appears. A message confirms that the table has been deinstalled successfully.

Now you are ready to install the new printer table.

Installing Printer Tables

When you install the new printer tables, you enter the abbreviation for the printer. Refer to Table 5-2 for the abbreviation of your printer.

To install new printer tables:

1. Enter the IT (Install Tables) option from the Table Management Menu.

   The Install Table(s) form appears. See Figure 5-7.

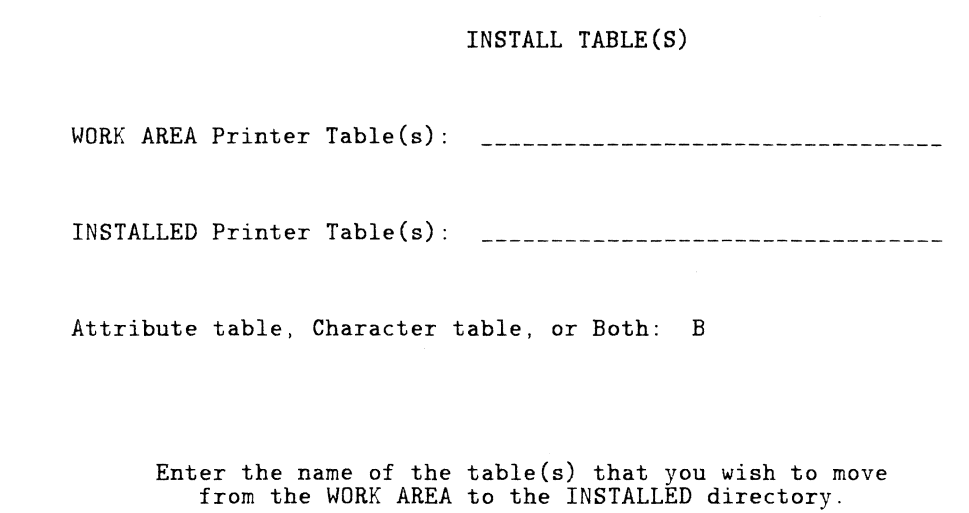

INSTALL TABLE(S)
WORK AREA Printer Table(s):
INSTALLED Printer Table(s):
Attribute table, Character table, or Both: B
Enter the name of the table(s) that you wish to move
from the WORK AREA to the INSTALLED directory.

Figure 5-7: Install Tables Form

2. In the WORK AREA Printer Table(s) field, type the abbreviation for the printer you want to use, for example, QUIET, and press RETURN. See Table 5-2 for a list of abbreviations.

3. In the INSTALLED Printer Table(s) field, type the same name as in the previous field, in this example, QUIET, and press RETURN. You can leave the field blank to use the same name as the work area printer.

4. Press RETURN to accept Both in the last field.

   WPS-PLUS installs two print tables for your printer, the attribute table and the character table.

   When the installation is complete, the Table Management Menu appears and a message tells you the printer tables were installed successfully.

5. At this point you can either verify the installation (see the next section, Verifying Tables) or you can exit the Printer Tables Utility.

6. To exit the Table Management Menu:

   - Press EXIT SCREEN (the 0 key on the keypad).

     The Print Tables Utility Menu appears.

   - Enter the EX option and press RETURN.

     The Utility Main Menu appears.

   - Enter the EX option and follow the instructions to return to the DOS prompt.

Verifying Tables

To verify the installation of the new printer tables:

1. At the Table Management Menu, enter the LV (List and Verify Tables) option and press RETURN.

   The Choose Directory form appears. See Figure 5-8.

```
                    CHOOSE DIRECTORY


    INSTALLED Tables or WORK AREA Tables:  __
```

Figure 5-8: Choose Directory Form

2. Type I in the blank to verify the installed tables and press RETURN.

   A verification form appears with the names of the tables in the installed area. These should be the tables you just installed. If not, repeat the new printer tables installation procedure.

   If you installed the Quietwriter printer tables, an entry would appear as shown in Figure 5-9.

```
                    LIST AND VERIFY TABLES

table                status
QUIET                Both tables exist

                    Status of INSTALLED tables.
Enter 'R' to reset/add table values, or just press RETURN to continue.
```

Figure 5-9: List and Verify Tables Form

3. Press RETURN.

   The Table Management Menu appears. You can either exit the menu by pressing EXIT SCREEN, or you can see a list of the work area printer tables.

   To see a list of the work area tables:

   - Enter the LV (List and Verify Tables) option and press RETURN.

     The Choose Directory form appears.

- Type W (for Work Area Tables) in the blank and press RETURN.

  The List and Verify form appears with a list of printers in your work area. Unless you have modified files, this is the list of all printer tables supplied in your kit. You can check the list against the list in Table 5-2.

- Press RETURN.

  The Table Management Menu appears.

- Press EXIT SCREEN (the 0 key on the keypad).

  The Print Tables Utility Menu appears.

- Enter the EX (Exit) option and press RETURN.

  The Utility Main Menu appears.

If the printers in Table 5-2 are not listed in the work area list of tables:

- The files may have been deleted. Use your UTILITY/PRINTER TBLS distribution diskette to copy those files to the work area directory, if you need them.
- The files may be in another directory or subdirectory. When the tables are installed, during the installation procedure, they are placed in a subdirectory called \WORKAREA. Check that and other directories for files with the printer abbreviation and .PRA and .PRC extensions. These are the printer attributes (.PRA) table and the printer character (.PRC) table.
- The files are in the correct area, but the profile information is incorrect. To update the profile:

  - At the Choose Directory form, type W.

    The List and Verify Tables form appears.

  - Type R and press RETURN to add to the list of tables.

    The Reset Table Values form appears.

  - Type the printer names, pressing RETURN between names. Use the abbreviations shown in Table 5-2, unless you have changed the names to create new printer tables.

- Press ENTER (the + key on the keypad) when you have finished.

  The Table Management Menu appears.

- Verify the printer tables by choosing the LV option from the Table Management Menu.

  If the List and Verify form does not show both printer tables for each printer, check the work area directory for .PRA and .PRC files for each printer. To do this on a diskette-based system, exit WPS-PLUS and type:

  ```
  A>DIR A:\WORKAREA <RETURN>
  ```

  A list of files in the work area appears. These are the names you can type after you press R at the List and Verify form. (Do not include the .PRA and .PRC extensions).

  If you have a fixed disk, and installed WPS-PLUS in the root directory, type:

  ```
  C>DIR C:\WORKAREA <RETURN>
  ```

  If you installed WPS-PLUS in a subdirectory, include that directory in the path name.

  Type the printer names in the List and Verify form, without the .PRA and .PRC extensions.

6

Modifying Printer Tables

When you modify printer tables for a particular printer, you are changing control sequences or values. These control sequences and values are software code that tells your printer what characters to print and how to print them.

You do not have to modify printer tables unless your WPS-PLUS kit does not have printer tables for your printer. See Table 5-1 for a list of the printer tables supplied with your WPS-PLUS kit.

Prerequisites for Modifying Printer Tables

This chapter is intended for systems programmers. Before you modify printer tables, you should have a basic understanding of the printer tables supplied for your printer. Also, read this chapter before you start to get an overview of the procedure.

What Are the Printer Tables?

There are two printer tables for each printer: the character table and the attribute table.

The character table lists all the ASCII, multinational, and technical characters the printer can print.

The attribute table is a list of all the printer's features, such as bolding and pitch settings. The attribute table shows the control sequences for each feature. The control sequences are the instructions to the printer that start and stop each feature.

When you create printer control blocks in a WPS-PLUS document, any key words from the attribute table can be entered in the control block. Remember that if you start a feature, such as landscape printing, you also need a printer control block to turn off the landscape where the text reverts to portrait mode. See *WPS-PLUS Editor Functions* for information on creating control blocks.

Do You Need to Modify Printer Tables?

To determine if you need to modify printer tables, do the following, before you start the editing process:

1. Install the printer tables that are closest to those of the printer you want to use. Use Table 5-1 in Chapter 5 as a checklist to match your printer's features to those of the listed printers.
2. Print test documents using those printer tables.

   The test documents should include all the features you intend to use, such as bolding, underlining, superscripts, subscripts, technical characters, multinational characters, and so forth.

   If you find that certain features are not working properly, note them carefully. For example, your printer may not show superscripts one half line above the base line.

If you cannot find a printer table that has all the features you need, modify the printer table closest to your printer. Once you have changed the control sequences to match those of your printer, install the modified printer table in your installed area.

Preparing to Modify Printer Tables

Once you have determined that you need to modify your printer table, do the following:

- Find a manual for your printer showing the control sequences or values for the items you want to change.

- Make a backup copy of the UTILITY/PRINTER TBLS diskette, if you have not done so already. See your DOS documentation for information on formatting and copying diskettes.
- Make sure the printer tables you want to modify are in the work area. The work area is a subdirectory, \WORKAREA, that was automatically created for the printer tables when you installed WPS-PLUS.

  If the printer tables exist only in the installed area, deinstall them. You can use the List and Verify option (LV) from the Table Management Menu to see a list of printers in both the installed and work areas. See Chapter 5 for instructions on verifying and deinstalling tables.

CAUTION: Before you modify printer tables, be sure you know exactly what parts of the character or attribute tables you want to change. Incorrect values or control sequences can cause your printer to malfunction.

Editing the Attribute Table

Before you begin this procedure, have on hand the list of features you want to modify. The attribute table is only for features, such as bolding, pitch, and underlining. If individual characters are printed incorrectly, modify the character table to have them printed correctly. Also find the control sequences for those features you want to change or add in the documentation supplied for your printer.

To edit the attribute table:

1. Start the Print Table Utility.

   Directions for starting the utility are in Chapter 5. See the section, Starting the Printer Table Utility.

2. From the WPS-PLUS/PC Utility Main Menu, enter the P option (Modify Printer Table) and press RETURN.

   The Print Tables Utility Menu appears.

3. Enter the PA (Printer Attributes) option and press RETURN.

   The Select Attribute Table form appears. See Figure 6-1.

```
                    SELECT ATTRIBUTE TABLE

Printer Attribute Table:  ----------------------------------------

Name of Resulting Table:  ----------------------------------------


Enter name of Attribute Table to be modified and name of Resulting Table.
     (Original file will be overwritten if new name is not chosen.)
```

Figure 6-1: Select Attribute Table Form

4. In the Printer Attribute Table field, type the name of the printer whose tables you are editing. These tables must be in the work area. For example, IBM5152, and press RETURN.

5. In the Name of the Resulting Table field, type the name of the printer you want to use. The name must follow the DOS restrictions for file names. For example, IMAGEN.

   By typing the name of your printer (IMAGEN) in the second field, you save a copy of the original (IBM5152) printer tables. When you print documents, you enter the new printer's name, IMAGEN, in this case, in the Document destination field of the Print Information form.

   If you do not enter a new name, the current version of the printer tables is not saved. (The original table is saved if you type Q to exit the table without saving your changes). Be sure you have the distribution diskettes or other copies of the printer tables in case you need them later.

6. Press RETURN to display the attribute table.

   The attribute table for the installed printer appears. It is similar to Figure 6-2.

```
                        DEFINE PRINTER ATTRIBUTES

  6

-------------------------------------------+-------------------------
Default vertical pitch (lines/inch)        |6
Default horizontal pitch (char/inch)       |10
Char positional width (print head movements)|1
Maximum sheet height (motor stops)         |504
Extra page ejects                          |1
Pass output tables? (Y/N)                  |N
Pass page limits? (Y/N)                    |N
Backspace character (ASCII value)          |8
Initialization sequence                    |<ESC>P<CR>
Termination sequence                       |<CR>
-------------------------------------------------------------------------
  UP / DOWN     MOVE current setting          E  EDIT current settin
  Prev Screen   Display prev 'page'           F  FILE changes
  Next Screen   Display next 'page'           Q  QUIT without saving
```

Figure 6-2: Sample Printer Attributes Table

7. Move the cursor to the attribute you want to edit using the Up and Down Arrow keys.

   You can edit only the items that are highlighted on your screen. The value of the highlighted item is repeated at the top of the screen.

   Note that you do not change the key word entry on the left side of the attribute table. However, you can add key words and control sequences for them at the bottom of the table.

   Blank fields indicate attributes that are not available on the printer.

8. Type E (for Edit). Do not press RETURN.

   A prompt appears for the new value.

9. Type the new value.

   As you type the new value, it appears under the old one at the top of the screen. Type each keystroke as it appears in your printer's manual. You must type the control characters in their token form, between angle brackets. For example, type the letters <ESC> rather than pressing the ESCAPE key.

10. Press RETURN when you have completed the change.

    The change is entered in the table.

Many of the entries in the table are paired. For example, there is one escape sequence to set bolding and another to reset bolding. If you change one of a pair, you probably have to change the second one as well. Check your printer manual.

To move the cursor within the attribute table use these keys:

- SHIFT/Down Arrow (the Down Arrow key on the keypad) -- moves the cursor down one line.
- SHIFT/Up Arrow (the Up Arrow key on the keypad) -- moves the cursor up one line.
- PREV SCREEN (F5 on the special function keys) -- moves the cursor back to the previous set of attributes.
- NEXT SCREEN (F6 on the special functions keys) -- advances the cursor to the next set of attributes.
- Gold PREV SCREEN (Gold is the Num Lock key) -- moves the cursor to the top of the table.
- Gold NEXT SCREEN -- moves the cursor to the bottom of the table.

Adding Key Words to the Attribute Table

You can add key words to the end of the attribute table when the attribute does not exist on the table. For example, your printer may have an italics font you want to use. Because there is no entry for italics in the attribute table, you can add it to the end of the list.

To add a key word to the attribute table:

1. Move the cursor to the bottom of the attribute table.
2. Hold down the SHIFT key and press the Down Arrow key to add an entry.

   A prompt asks if you want to add your own entry.

3. Type Y. Do not press RETURN.

   A highlighted blank line appears at the bottom of the list. There is a prompt for the key word near the top of the screen.

4. Type the key word in capital letters, SET_ITALICS for example, and press RETURN. The key word you enter must be one word.

   SET_ITALICS appears in the left side of the table. A prompt asks for the value.

5. Type the escape sequence or value for your key word. Type it exactly as it appears in your printer manual.

6. Press RETURN after the last character.

   WPS-PLUS enters the value on the right side of the attribute table.

7. To enter another key word, press the Down Arrow key.

   The prompt for another key word appears.

8. Repeat this sequence of steps until all your key words are entered.

9. To keep all the changes you have made, type F (for File changes).

10. To exit the attribute table without saving the changes you made, type Q (for QUIT without saving changes). A prompt asks you to confirm that you do not want to save the changes. Press Y.

    The Print Tables Utility Menu appears. Enter the EX (Exit) option to exit the utility or choose the TM (Table Management) option to install the table you just modified. Before you can use the modified tables, you have to install the modified tables. See Installing Printer Tables in Chapter 5 for instructions.

If you modify and rename only the attribute table, you must also change the name of the character table to use both printer tables. For example, if you need to modify only the IBM 5152 attribute table to support the IMAGEN printer, you must start the process to modify the character table. However, after you have used IMAGEN for the resulting table name and displayed the character table, type F to file the table. When you use the List and Verify option to see the installed tables, both character and attribute tables appear for the IMAGEN printer.

Modifying the Character Table

The character table is a list of all control, ASCII, multinational, and technical characters your printer can print. Each character is listed along with the values used by the printer to print that character. You can alter the character table to print foreign characters or to build special technical characters.

The character table is comprised of these character types:

Number	Character
0 - 31	ASCII control characters
32	The space character
33 - 126	Printable characters from a to z, upper and lower cases, the numbers 0 through 9 and special characters
127	The delete character
128 - 383	Multinational and technical characters

When you edit the character table you can do the following:

- Create a new character, such as an arrow (from two hyphens and a right angle bracket). Your printer prints this arrow when you press the key assigned to the arrow.
- Change the table to print non-English letters, such as letters with an umlaut or accent marks to match what appears on your keyboard.
- Change blocks of characters at a time. For example, you can change the multinational characters to match the letters that appear on your keyboard.

To edit the character table:

1. Start the Printer Table Utility by following the directions in Chapter 5. See the section, Starting the Printer Table Utility.

2. At the WPS-PLUS/PC Utility Main Menu, enter P (Modify Printer Table) and press RETURN.

   The Print Tables Utility menu appears.

   If the Configure Directories form appears instead, you need to update the profile data. See Figure 5-4 in Chapter 5 for directions on what information to enter in the Configure Directories form.

3. Enter the PC (Printer Characters) option and press RETURN.

   The first Select Character Table form appears. See Figure 6-3.

```
                          SELECT CHARACTER TABLE

Printer Character Table:  ----------------------------------------

Range of characters to use from this table:     INITIAL:  0
                                                  FINAL:  383
Initial value of range in resulting table:  0

Any more files to process?  N

    TABLE                    INPUT RANGE              OUTPUT RANGE
```

Figure 6-3: The Select Character Tables Form

4. In the Printer Character Table field, type the name of the printer table you want to modify, for example, IBM5152, and press RETURN.

5. Press RETURN to accept the default values in the INITIAL and FINAL fields. Accepting these values allows you to modify the entire character table.

   If you want only part of the IBM5152 table, enter the values for the section you want. For example, you can enter 0 for the initial value and 127 for the final value to use only the first 128 characters.

6. Press RETURN again to accept zero as the initial value of the range in the resulting table. Doing this allows you to modify the entire table.

7. Press RETURN to accept N in the field that asks if there are any more files to process.

   If you want to combine the character tables from two or more printers, type Y in this field. For example, suppose you want to create a character table for your printer that has the first 128 characters from one table, the second 128 characters from a second table, and the final 128 characters from a third table. Complete this form once for the first printer table with the initial range at zero, the final range at 128, and the initial value in the resulting table at 0. Then type Y in the last field to add the second printer.

   After you type Y, the printer's name and the ranges you entered are displayed for your confirmation. The cursor returns to the first field where you type the second table name. For the second printer, start the initial value at 128, the final value at 255, the initial value in the resulting table at 128, and type Y to add the third printer. The tables are shown at the bottom of the screen with the ranges for your information. Type the third table name, set the initial value to 256, the final value to 383, the initial value for the resulting table to 256, and type N to process more files.

   A character table is created that is a combination of the characater tables from the three printer tables you specified.

8. Press SHIFT/DO (DO is the + key on the keypad) when the form is complete.

   The second Select Character Table form appears. See Figure 6-4.

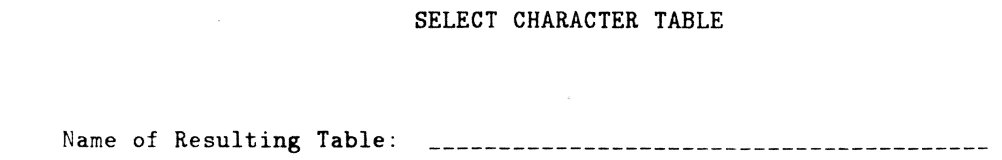


Figure 6-4: The Select Character Table Form

9. In the Name of the Resulting Table field, enter the name of the printer for which you are creating tables, IMAGEN, for example, and press RETURN. If you entered only one table in the Select Character Table, that name appears in the field. Type over the name to enter a new one.

The character table appears. The display is similar to this:

```
                          DEFINE PRINTER CHARACTERS

000 -1

---+|--------------------+----------------------+------------------
chr||       Cell 1       |       Cell 2         |         Cell 3
---+|--------------------+----------------------+------------------
000||-1                   |-1                    |-1
001||147                  |-1                    |-1
002||139                  |-1                    |-1
003||72                   |-1                    |-1
004||70                   |-1                    |-1
005||67                   |-1                    |-1
006||76                   |-1                    |-1
007||111                  |-1                    |-1
008||43                   |-1                    |-1
009||78                   |-1                    |-1
---+|--------------------+----------------------+------------------

     ARROWS  alter highlighted cell
       C     define a CONSTANT              F  FILE changes
       D     DISPLAY from char >
       E     EDIT highlighted cell          Q  QUIT without saving
       M     MULTIPLE editing
```

Figure 6-5: Sample Character Table

The first column, chr, is the number of the character. Cell 1 is the decimal value of the first character that makes up the entire character. For example, if the character number is 33, cell 1 has the decimal value of the exclamation mark (!), which is ASCII 33. Cells 2 and 3 are the second and third parts of the character, if they are required. The -1 designation means there are no more characters required.

To move the cursor within the character table:

- Press SHIFT/Down Arrow (the arrow keys are on the keypad) to move to the next line.
- Press SHIFT/Up Arrow to move to the previous line.

- Press SHIFT/Right Arrow and SHIFT/LEFT Arrow to move the cursor right and left to other cells.
- Enter the D (Display from char >) option and type a character number to display the character table beginning at the number you specify.

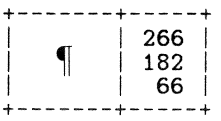
Example of a Change to the Character Table

As an example of a change to the table, suppose you want to print a vertical bar instead of the paragraph marker your printer prints.

To change the character table:

1. Using the manual for your printer, find the part of your printer table that shows the decimal code for the paragraph sign.

   The entry in your printer manual might look something like the following example. In this chart, 266 is the hexadecimal value, 182 is the decimal value and 66 is the octal value for the paragraph marker character.



2. On your screen, move the cursor to character 182 in the character table by typing D182. (D is the Display from char > option).

   WPS-PLUS displays part of the character table beginning with character number 182.

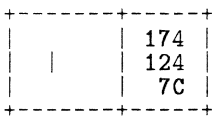
```
---+|--------------------|--------------------|--------------------
chr||      Cell 1        |      Cell 2        |      Cell 3
---+|--------------------|--------------------|--------------------
182||80                  |114                 |-1
.
.
.
```

The 80 in Cell 1 is the decimal code for P and the 114 in Cell 2 is the code for r. Because this printer does not have the new paragraph mark, (¶), Pr is printed instead.

3. Enter the E (for EDIT highlighted cell) option from the menu at the bottom of the screen. Do not press RETURN.

   The first cell is highlighted and is also displayed at the top of the screen. A prompt asks you to enter the new value.

4. Find the code for the vertical bar in your printer's manual. It might look like the following example, where 124 is the decimal value of the vertical bar character:



5. Type 124, the code for the vertical bar.

6. Press SHIFT/Right Arrow to move to Cell 2.

7. Enter the E (EDIT highlighted cell) option.

8. Type -1 and press RETURN. You type -1 because no other character is required for the vertical bar.

   The entry now looks like this:

```
---++------------------+----------------------+--------------------
chr||      Cell 1      |       Cell 2         |         Cell 3
---++------------------+----------------------+--------------------
182||124                |-1                    |-1
.
.
.
```

9. File the table with the new entry by typing F (for FILE changes). Or exit the table without saving the new entry by typing Q (for QUIT without saving changes). If you press Q, a prompt asks you to confirm that you do not want to save the changes.

   The Print Tables Utility Menu appears.

Before you can use the modified character table, you have to install it. See Chapter 5 for instructions. After you install the table, the vertical bar is printed in place of Pr.

Editing Groups of Cells

When you edit the character table, you can edit a group of cells at one time. The cells must require only changes in sequential order.

For example, if your printer cannot print the technical characters 160 through 254, and you prefer to have characters 32 through 126 printed as the fallback characters, you can reassign the values for characters 160 through 254 as a group. The following example shows how to edit the character table to reassign those values.

Remember, you can exit the character table without saving the changes by entering Q.

To edit a group of characters:

1. Enter M from the menu on the character table.

   A series of prompts asks for the cell to change and where to begin and end the changes:

   ```
   Cell >
   ```

2. Type the cell number, 1, in this example, and press RETURN.

   A prompt appears for the initial character:

   ```
   Init char >
   ```

3. Type the beginning character number, 160, in this case and press RETURN.

   The next prompt asks for the final character:

   ```
   Final char >
   ```

4. Type the final character, 254, and press RETURN.

   The new value prompt appears:

   ```
   New value >
   ```

5. Type the value for the first character. For this example type 32 for the new value of character 160.

   The prompt for the increment appears:

   ```
   Increment >
   ```

6. Type the value for the increment. In this case, it is 1, to assign the values 32 through 126 to characters 160 through 254.

   When you press RETURN all the values are changed.

7. Repeat the procedure for cells 2 and 3. In this example, you use the same entries as you did for cell 1 for the initial character and final character. However, use -1 for the new value and 0 for the increment.

   When you have finished reassigning values, -1 appears in cells 2 and 3. This indicates no additional characters are required to print the character.

In general, if all cells in the range are to have the same value, such as a constant like MULTI, then the response to the increment prompt is 0. If you would like consecutive cells to contain a sequence of values, say 97 to 122, then the increment would be 1. The new value applies to the first character cell in the range, and the others are incremented by one.

Character Modifiers

There are four character modifiers defined by the WPS-PLUS printer support. You can combine the modifier and the character to print an alternate character, or to combine two or three characters in one space. See Table 6-1.

Table 6-1: Character Modifiers

Constant	Printer Response
ALT	Uses an alternate character set
PLD	Prints character partial line down
PLU	Prints character partial line up
OVR	Overstrikes first character with next

The ALT modifier indicates that an alternate character set is being used. Note its use in the predefined command constants below.

The PLD modifier indicates that the associated character is printed on a partial line down, or as a subscript.

The PLU modifier indicates that the associated character is printed on a partial line up, or as a superscript.

The OVR modifier indicates that the associated character is overstruck with the character contained in the next cell.

These modifiers are combined in the table with the ASCII value of the character by a vertical bar '|'. For example, a cell could be defined as follows to produce a superscripted 2 (where the 50 in Cell 1 is the ASCII character 2).

chr	Cell 1	Cell 2	Cell 3
011	PLU | 50	-1	-1

Predefined Command Constants

For the DIGITAL LA210 printer only, there are eight predefined command constants that may be used as the value of a cell. See Table 6-2.

Table 6-2: Predefined Constants

Constant	Character Combination
FRANCE	ALT | 82
GERMAN	ALT | 75
NORWAY	ALT | 54
SPAIN	ALT | 90
SWEDEN	ALT | 55
VT100	ALT | 48
MULTI	ALT | 60
TECH	ALT | 62

User-Defined Constants

You can define your own constants by pressing the C while you are editing character tables. The constant can save you having to retype a complex expression to describe the contents of a cell.

After you type C, you see a prompt for a single-word constant and the form of the constant definition. Enter the constant and its definition. For example:

```
Enter constant name > SUB1
Enter definition > PLD | 49
```

Now you can enter SUB1 as the value of a cell instead of typing PLD | 49.

Reconfiguring the Work Area

You reconfigure the work area to indicate that the printer tables are in a different subdirectory. For example, assume someone has printer tables for an IMAGEN printer in the subdirectory \PTABLES. If someone else uses the diskette with those tables, the work area must be changed so the tables can be found.

To reconfigure the work area:

1. Enter the RW (Reconfigure Work Area) option from the Table Management Menu.

   The Reconfigure Work Area form appears with the current work area in the first field. See Figure 6-6 as an example.

```
                    RECONFIGURE WORK AREA


Current WORK AREA:  C:\WORKAREA
    New WORK AREA:


        Enter the name of the new directory that you
             wish to define for the WORK AREA.
```

Figure 6-6: Reconfigure Work Area Form

2. Type the new directory name. For example:

```
C:\PTABLES <RETURN>
```

   The Table Management Menu appears. A message tells you the work area has been reconfigured.

   You may have to reset the table values to update the profile with the new work area. To check the tables in the work area:

   - From the Table Management Menu, enter LV.
   - At the Choose Directory form, type W.
   - If the new table is not on the list, type R to reset the table values.

- Type the printer names for all printer tables in the work area in the Reset Table Values form. Press RETURN after each table. After the last table, press ENTER (the + key on the keypad).

3. Press EXIT SCREEN (the 0 on the keypad) at the Table Management Menu.
4. Enter EX at the next two tables to exit the printer table utility.

   The DOS prompt appears.

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